

Methods of maintaining motivation for volleyball in the student environment during the war

Kateryna Voloshchuk¹, Hrygorii Nekrasov², Natalia Samsutina³,
Vadym Samoilenko⁴, Olha Anastasova⁵

Berdiansk State Pedagogical University

Abstract

The importance of volleyball in the field of education and health improvement in the context of modern challenges (including military ones) has acquired a new meaning. The purpose of the article is to analyse the methods of supporting motivation to play volleyball among higher education students against the background of the deployment of Russian aggression as a critical factor. To achieve this goal, a number of scientific methods were used: content analysis of scientific literature, comparative analysis, modelling method. A total of 31 items of literature were selected for analysis. The results show that students are motivated to play volleyball by certain motives. It has been proved that in the global dimension and in times of martial law, patriotism and the desire to represent one's country with dignity are relevant, etc. no less relevant are personal motivators related to the realisation of one's own competitive desires. The conclusions emphasise that in the conditions of military tan, motivation can fall, so an important task for the coaching and teaching team is to constantly search for new methods to support students. An important direction for future research is an empirical study of the outlined methods.

Keywords

Volleyball training, motivational factors, sports activity, war.

¹ Department of Theory and Methods of Physical Education, Department of Physical Culture, Sports and Health Technologies, Faculty of Physical Culture, Sports and Human Health katayvoloschuk24@gmail.com

² Department of physical culture, sports and health technologies, Faculty of Physical Culture, Sports and Human Health gplayer03082017@gmail.com

³ Department of Theory and Methods of Physical education, Faculty of Physical Culture, Sports and Human Health nmsam@ukr.net

⁴ Department of Theory and Methods of Physical Education, Faculty of Physical Culture, Sports and Human Health vadim.samol@gmail.com

⁵ Department of physical culture, sports and health technologies, Faculty of Physical Culture, Sports and Human Health, Department of physical culture, sports and health technologies olgaanastasova23@gmail.com

Introduction

The modern digital era presents important challenges for the health sector, as a sedentary lifestyle leads to a gradual deterioration in health, not only in terms of dangerous physical symptoms (e.g. obesity) but also in terms of psychological aspects. At the same time, psychological or mental problems can become more frequent during wartime, as shown by Yefremenko and Syrovatko (2024) or Bondarenko (2022).

Against this backdrop, the mass participation in outdoor sports, including volleyball, is a highly relevant issue in counteracting the general negative effects of war and digitalisation (Suprunenko et al., 2023). However, the lack of motivation has become a serious obstacle to the implementation of relevant measures. As of today, motivation is defined as a psychological indicator of an individual that encourages the performance of certain activities. However, against the backdrop of students' attention being blurred by other stimuli, there is a need not only to find updated methods for psychological support, but also to search for updated knowledge about the existing ones.

The motivational structure of modern higher education students is dominated by factors that do not favour physical activity and exercises to improve health, professional and sporting achievements, etc. The search for beauty ideals, the desire to take care of one's health and engage in physical activity are simultaneously combined with procrastination, reduced physical activity, inability to organise oneself, follow a daily routine, use leisure time, etc. (Tendinha et al., 2021) For this reason, the availability of volleyball classes alone will not be a sufficient factor in increasing motivation to exercise. For this reason, there is a need to take into account many other factors, focusing on the modern motivational priorities of higher education students.

Important issues that require further research are taking into account various psychological and pedagogical aspects, finding a balance between entertainment and sport, taking into account special socio-economic conditions (for Ukrainian realities, the challenges of martial law), general living standards, proximity and safety of the material and technical base, availability of appropriate experienced coaches who can properly distribute the workload and not "destroy" students' desire to learn the game (Alves Grubertt & Serassuelo Junior, 2021; Amin Al Ashqar, 2019). Important elements of finding motivation are the sporting traditions of the higher education institution, support

for mass training as a kind of response to psychological stress and global challenges to the healthcare system. In order to develop motivation, it is worth considering that sectional volleyball classes turn into a form of self-expression and self-affirmation of higher education students, determine their lifestyle, and form socio-cultural interests and priorities. Therefore, the study of conditions for improving students' motivation to play volleyball and physical education in general requires further scientific consideration and analysis.

Therefore, the purpose of the article is to study methods of supporting motivation to play volleyball among higher education students against the background of the deployment of Russian aggression as a critical factor.

Methodology

Taking into account the specifics of the research object, the article uses elements of qualitative analysis of the relevant scientific literature.

Data collection

Data collection was carried out in several stages. First of all, the state of development of scientific issues was studied, which was realised by selecting relevant case studies by other scholars. For this purpose, the main keywords related to the subject of the article were used. They were entered into the search databases Google Scholar, Scopus and Web of Science. The search algorithm was based on the following keywords and concepts: volleyball training, motivational factors, sports activity, war, system, model, motivation. After the keyword search, attention was paid to those publications that were related to the proposed criteria. First of all, the following aspects were important:

1. The preference was given to those scientific publications that are devoted to the problems of sports motivation and organisation of volleyball classes in the university environment.

2. If the scientific publication goes beyond criterion 1, it should clearly cover modern innovative educational trends or cover the problem of education in wartime.

3. The analysis of scientific publications should demonstrate that the work contains relevant data.

4. The selection criteria were applied chronologically - from 2016 onwards.

5. Practical value: the sources should contain practical recommendations and advice that can be used to increase the motivation of higher education students in the field of sports.

The proposed criteria have become a reliable basis for selecting relevant scientific publications that contain up-to-date data on the main issues of the article.

Thus, 31 items of literature related to the subject of this study were selected for the study.

Data analysis

Several scientific research methods were used to write the text of the study: content analysis of the literature.

In particular, the first stage of content analysis consisted in the analysis of abstracts of selected studies. The second stage is the results themselves. To ensure the validity and reliability of the results, multiple data sources were triangulated. The use of content analysis made it possible to characterise the main theories of scientists on increasing motivation for volleyball.

The combination of qualitative data will provide a comprehensive understanding of the research problem. Additionally, checking will be conducted by sharing preliminary findings with researchers to confirm the accuracy of the data interpretation. The comparative analysis allowed the authors to compare different points of view on the existing problems.

The main research questions relate to such directions:

What are the key features of the development of student motivation and interest in sports?

What are the main components of supporting student motivation?

What is the model for supporting students' motivation to practice volleyball?

Results

In recent years, against the background of a significant intensification of the educational process and the introduction of digital learning in universities, there have been noticeable trends towards limiting the amount of physical activity of students, which will have a negative impact on their physical condition. The situation is also complicated by the fact that the existing traditional forms of organising and conducting volleyball (and physical

education in general) classes reduce the interest of students in continuing systematic independent exercise practice (Claver et al., 2017).

An important role in building the right educational model is to gradually increase motivation as an effective means of continuing to use physical education in university studies to effectively compensate for the lack of daily activity (González-Serrano et al., 2020). According to many experts, an important prerequisite for developing interest in volleyball is the opportunity for students to demonstrate their abilities and discover hidden potentials.

The basis for forming motivation for volleyball training are motives that are systematised in groups. Each group contains both dominant motives and other (secondary) motives. In times of war, moral motives (patriotism, the desire to represent one's country or city in competitions), motives related to the attitude towards the opponent, competitive desires, aesthetic motives, the desire to assert oneself, etc. may become more active.

Motivation in the field of sports activity is determined by the improvement of health, development of aesthetic goals and achievement of certain sports results (Shkola et al., 2022; Gunawan, 2019). At the same time, in physical education, where sports activities can often be compulsory, both internal motivations and certain external factors (the need for assessment, credit, the desire to follow classmates, etc.) can serve as aspects of motivation (Schiff & Supriady, 2023; Hansen et al., 2017). At the same time, the following components are important conditions for forming motivation for volleyball training: 1) availability of appropriate material and technical facilities of the educational institution for organising volleyball classes year-round; 2) availability of competent and experienced teaching staff (teachers, coaches) who should have up-to-date knowledge of volleyball; 3) providing opportunities for students to engage in active sports activities in their free time through the introduction of special volleyball sections; ensuring full (Hasyim & Bachtiar, 2021; Hermanto et al., 2023).

At the same time, a particularly important condition is the creation or promotion of student sports clubs. Another important condition is to provide opportunities to regularly participate in volleyball competitions of various levels (both between educational institutions and national or international). Thus, the effectiveness of forming students' motivation to play volleyball as a natural connection of the health-forming educational space requires the unity of individual systemic and functional components (see Figure 1).

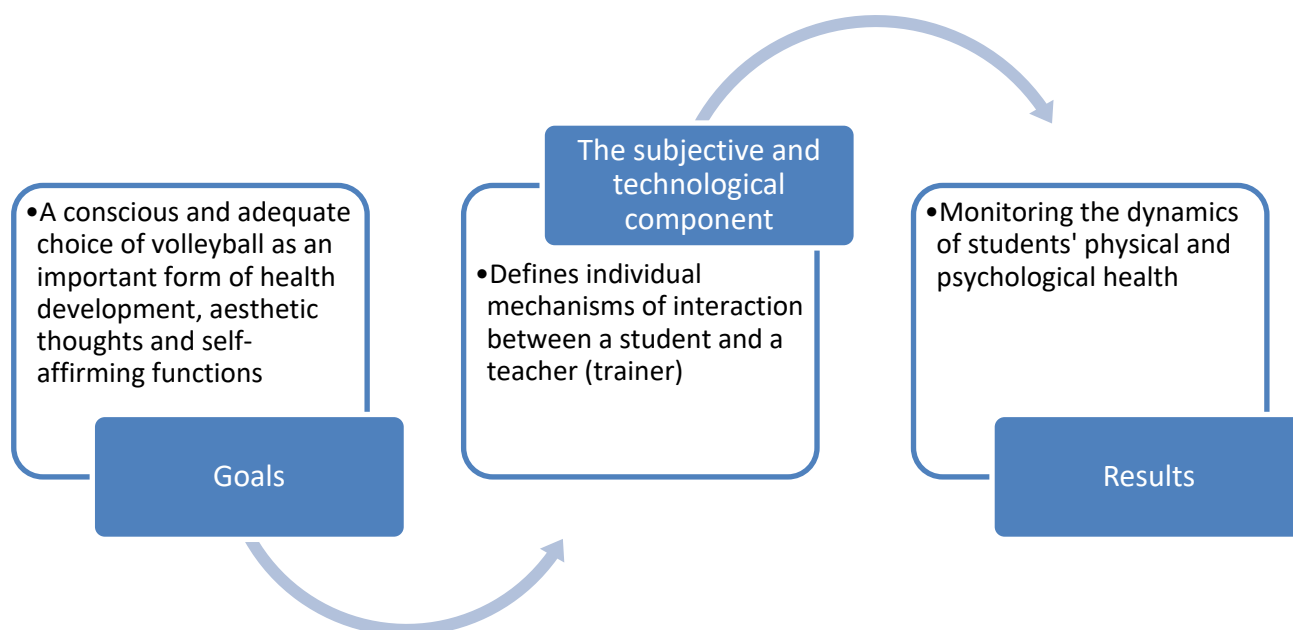


Figure 1: Scheme of the main components of forming motivation for volleyball training

Source: Authors' development

Thus, as can be seen from Figure 1, motivation should be seen as a psychological and physiological regulation that determines the emergence of a desire to play volleyball, which determines the choice of this sport and the ways of performing competitive activities. Within this framework, the mechanism of self-interest is triggered, and the more active the teaching methods offered by teachers are, the more interesting they are for students (Chen, 2014; Kolev, 2020). To increase students' interest in improving their own physical condition, an important aspect is to involve higher education students and teachers in additional programmes, competitions, seminars, and lectures that would emphasise the importance of modern health problems, the need to take care of it and develop their physical condition.

Therefore, effective measures to increase the level of student motivation are to persuade and promote a healthy lifestyle (Syahrudin et al., 2019; Ribeiro et al., 2020). The relevance of self-care is being brought to the forefront through the digital sphere and social media. Today's students actively follow the lives of celebrities, famous athletes and bloggers, and have the opportunity to listen to additional advice on diet and exercise (Lazareva et al., 2023). Against this backdrop, one of the most important principles is the development of needs, behavioural motivations and general interests, with the aim of developing a system of physical education exercises that meets or at least approximates

the ideals known from the digital environment (Hernández-Andreo et al., 2020; Shevchuk, 2022).

Professional volleyball classes can contribute to such outcomes, but require clear teaching: there is a need to explain to young people that the behind-the-scenes life of famous bloggers or stars may differ from reality, and that their style is developed by entire teams of professionals. At the same time, sports activities are just as accessible to students as they are to celebrities, and general developmental team sports (such as volleyball), in general, can improve not only physical condition, taking into account individual and social needs. But also well-being and psychological self-confidence.

The specificity of volleyball (as well as any other sport) lies in the fact that awareness of information turns into a motivated urge to exercise, to form a lifestyle that would allow to successfully achieve both personal and social goals. At the same time, improving the physical condition of higher education students (and, accordingly, their level of well-being) is realised only through systematic training, which gives an additional impetus to the training regime and health improvement (Liu & Lipowski, 2021; Vignadelli et al., 2019; Hruzevskiy, 2023). All these aspects, according to the researchers, are implemented during volleyball classes at the educational institution, organisation of the relevant sectional work, independent home exercises, etc. Therefore, involving students in volleyball is a very effective way to increase their motivation to study in general.

At the same time, it should be borne in mind that volleyball training during wartime is a serious source of various influences on the mental state of students. In particular, depending on the dynamics of such crisis influences, students' motivation can be transformed, so the support of the coaching staff is essential (Liang et al., 2016). Coaching and teaching staff should know how students endure the days of war, what events precede the competition and how the competition itself affects their condition. Therefore, the methodology of forming motivation for volleyball training should be phased and systematic. Table 1 shows the basic model of implementation of the above methods.

Table 1: *Model for implementing motivation incentives*

Steps	Components
Stage 1 Formation of students' involvement in volleyball	Students' interest in practical health improvement work during the war; Personal example of a teacher (coach);

	Stories about achievements in volleyball and its importance for maintaining physical and mental health during the war.
Stage 2 Informatisation	Informing about the impact of volleyball training to maintain the functionality of the body system; Acquaintance with theoretical and methodological information on self-regulation of physical condition during the war; Acquaintance with the maintenance of physical condition by additional volleyball classes.
Stage 3 Supporting motivation	In order to maintain the sustainability of students' motivation, create situations in which they must have a desire and a plan to achieve their goals.
Stage 4 Formation of motivational trend	Analysis of sports activities; Monitoring the dynamics of results; Monitoring of psychological and mental state; Organisation of reflection on classes, self-control and self-analysis.

Source: Authors' development

Thus, the development and formation of motivation for volleyball training during wartime requires significant emotional and physical effort. Since the effectiveness of these efforts can be assessed by the result, and not every student can cope with this task without the help of a teacher or coach, it is necessary to focus the overall focus of the system of sports and physical education on the formation of a special culture of attitude to physical activity and the basic principles of healthy lifestyle among students.

Discussion

The obtained results demonstrated that support for students' motivation to play volleyball during wartime should be comprehensive. An important role in this system is played by the motives themselves, which can be both internal and external (Kozlovskiy et al., 2024). The process of maintaining motivation and forming a motivational tendency should consist not only of analysing the sports activities of students, monitoring results, but also of constant psychological support (based on monitoring the psychological and mental state). Many scientists agree with this statement. In particular, the studies by Hsu and Valentova (2020) and Marheni et al. (2019) demonstrate that psychological skills are an important and effective aspect of any sporting activity. These researchers proved that psychological health complements the physical skills of team sports in general and volleyball in particular. Fang Zheng (2022) also showed the relationship between

motivation, psychology, and the level of sports performance. The scientist emphasised training based on the development of sports psychological abilities.

The results are in line with the statements of scientists that in order to counteract the negative effects of the lack of physical activity among students, it is important to engage in physical activity, which affects the further preservation and improvement of general health, comprehensive development, improvement of psychological stability (in war conditions) and performance, reduction of fatigue and anxiety, improvement of immunity and resistance to various diseases (Fatih Kucukibis & Gul, 2019).

The paper focuses on the fact that military actions can negatively affect the emotional state of students, which can negatively affect their sports activities. In general, modern scholars have studied in detail the various manifestations of war on the education sector and emphasised various mechanisms to counteract them (Malynovskyi, Duka & Yaroshenko, 2019; Shevchuk, 2022; Chovhaniuk et al., 2023). At the same time, modern scholars have paid special attention to both the challenges and opportunities for the development of education in war and crisis situations, in particular, this issue is discussed in detail in the studies of Bondarenko (2022) Vasilache (2022) and Kuzheliev et al. (2023). The assertion that it is important to maintain the psychological state of students during wartime is also confirmed by Yefremenko and Syrovatko (2024), who describe the impact of war on the emotional and mental state of students. The researchers proved that during the analysed period, the indicators of psychological state deteriorated, so modern teachers and trainers should support and monitor the emotional state of students.

As many researchers have rightly noted, volleyball is one of the most popular sports among students that are cultivated in higher education institutions (Fatih Kucukibis & Gul, 2019; Bhandari, 2023). This sport allows for physical development, creating the necessary conditions for comprehensive physical development, improving health, filling learning with active recreation, promoting bright leisure and meaningful recreation of students, facilitating their self-realisation, acquiring skills for independent healthy lifestyle. Researchers also emphasise that systematic volleyball training forms an appropriate level of physical activity, improves physiological processes in the body, and promotes active work of the body (Pratiwi et al., 2023).

In general, volleyball training contributes to the overall improvement of students' health, increases the body's defences, improves anthropometric indicators, the functional state of the cardiovascular and respiratory systems, and promotes psychological comfort, which is an extremely important indicator in war. Systematic volleyball training forms an

idea of a healthy lifestyle among students, engages them in more active physical education, and makes them interested in further self-improvement. Therefore, the novelty of the study is to identify the main components of motivation formation for volleyball among students.

Conclusions

Hence, the importance of volleyball in the field of education and health improvement acquires a completely new meaning in times of war. Training itself is a good motivator for self-development, but to achieve the best effect, it is important to follow certain additional rules for maintaining motivation. The main basis for forming motivation to attend volleyball classes are motives that are systematised in groups. In particular, in times of martial law, moral order is important - we are talking about patriotism, the desire to represent the country with dignity, etc. Motives related to attitudes towards rivals and the realisation of one's own competitive desires also remain relevant. Aesthetic motives, the desire to assert oneself, to achieve psychological stress resistance, etc. are also important. The study found that motivation in the field of sports and volleyball is determined by the need to improve health, self-development, etc. At the same time, within the framework of physical education in higher education institutions, where sports activities can often be compulsory, aspects of motivation are internal motivations and certain external factors (the need to obtain a grade or credit, the desire to follow classmates or demonstrate oneself, etc.)

At the same time, in order to increase the involvement of higher education students in volleyball, it is proposed to use a model consisting of several stages: formation of students' involvement in volleyball, informatisation, support for motivation, formation of a motivational tendency. At the same time, teaching volleyball during military operations is a serious source in counteracting the crisis impact on the psychological state of students. Therefore, depending on the dynamics of negative influences, motivation in training can gradually degrade, so support from coaches and teachers is mandatory. The coaching and teaching team should know how destructive military events are for the student psyche and be able to counteract such manifestations by motivating students to further game and sports success.

However, the limitations of this study should also be acknowledged. Above all, subjectivism in the present works can be an important shortcoming. Therefore, an important direction for further research is the empirical verification of the effectiveness

of the motivation support methods mentioned in the text on the basis of the conducted experiment and questionnaire among students.

References

- Alves Grubertt, G., & Serassuelo Junior, H. (2021). Sport practice motives of brazilian pupil-athletes. In *Sport Psychology in Sports, Exercise and Physical Activity*. IntechOpen. <https://doi.org/10.5772/intechopen.98791>.
- Amin Al Ashqar, M. (2019). Psychological steadfastness and its relationship with the competition anxiety and motivation of the sports achievement for volleyball players seating. *The International Scientific Journal of Physical Education and Sport Sciences*, 7(1), 83–94. <https://doi.org/10.21608/isjpes.2019.233971>.
- Bhandari, M. P. (2023). Past and present of social inequality: analysing structure and future trends. *Futurity of Social Sciences*, 1(3), 47–60. <https://doi.org/10.57125/FS.2023.09.20.04>
- Bondarenko, H. (2022). Ukrainian education in wartime: Challenges and problems. *The Journal of V. N. Karazin Kharkiv National University. Series: History*, (62), 142–159. <https://doi.org/10.26565/2220-7929-2022-62-06>.
- Chen, Y. (2014). The investigation on motivation of female college students for sports activities participation and the countermeasure on sport consciousness cultivation. In *International Conference on Education, Language, Art and Intercultural Communication (ICELAIC-14)*. Atlantis Press. <https://doi.org/10.2991/icelaic-14.2014.25>.
- Chovhaniuk, O., Bashkirova, L., Meleha, K., & Yakymenko, V. (2023). Study of the state of health in the conditions of constant numerous transitional and intermediate stages. *Futurity Medicine*, 2(2), 26–34. <https://doi.org/10.57125/FEM.2023.06.30.03>
- Claver, F., Jiménez, R., Gil-Arias, A., Moreno, A., & Moreno, M. P. (2017). The cognitive and motivation intervention program in youth female volleyball players. *Journal of Human Kinetics*, 59(1), 55–65. <https://doi.org/10.1515/hukin-2017-0147>.
- Fang Zheng. (2022). The relationship between sports psychology, self-motivation and educational attainment level at university-level education in China. *Revista De Psicología Del Deporte (Journal of Sport Psychology)*, 31(1), 167–178. <https://www.rpd-online.com/index.php/rpd/article/view/659>.

- Fatih Kucukibis, H., & Gul, M. (2019). Study on sports high school students' motivation levels in sports by some variables. *Universal Journal of Educational Research*, 7(3), 839–847. <https://doi.org/10.13189/ujer.2019.070325>.
- González-Serrano, M. H., Hervás, J. C., Valantine, I., Dos-Santos, M. A., & Moreno, F. C. (2020). Impact of lifestyle oriented-motivation and corporate social responsibility on multiadventure sports firms' performance. *International Entrepreneurship and Management Journal*, 16(3), 935–959. <https://doi.org/10.1007/s11365-019-00611-7>.
- Gunawan, B. (2019). Relationship of self control, critical thinking, motivation with volleyball games. In *Proceedings of the 3rd International Conference on Sport Science, Health, and Physical Education (ICSSHPE 2018)*. Atlantis Press. <https://doi.org/10.2991/icsshpe-18.2019.58>.
- Hansen, J. M., Wallman, A., Teshome, D., & Sporrang, S. K. (2017). A study on student environment, extracurricular activities, motivation and academic achievements. *Research in Social and Administrative Pharmacy*, 13(3). <https://doi.org/10.1016/j.sapharm.2017.02.086>.
- Hasyim, H., & Bachtiar, I. (2021). Improving volleyball game learning outcomes through cooperative learning model. *Gorontalo Sport Science*, 1(1), 1. <https://doi.org/10.31314/gss.v1i1.912>.
- Hermanto, A. W., Udin, T., & Sudirman, S. (2023). Effect of learning methods, extracurricular activities, and perceptions in the campus environment on character motivation of student. *Jurnal Penelitian Pendidikan IPA*, 9(3), 1551–1557. <https://doi.org/10.29303/jppipa.v9i3.3144>.
- Hernández-Andreo, L., Gómez-Mármol, A., & Cifo-Izquierdo, M. I. (2020). Effects on motivation and implicit beliefs about self ability using the sports education model and the traditional style in secondary education. *Sustainability*, 12(9), 3843. <https://doi.org/10.3390/su12093843>.
- Hruzevskyi, O. (2023). Experience of implementing e-learning to support the educational process in EU countries during the COVID-19 pandemic: A bibliometric review. *E-Learning Innovations Journal*, 1(1), 55-70. <https://doi.org/10.57125/ELIJ.2023.03.25.03>
- Hsu, R. M. C. S., & Valentova, J. V. (2020). Motivation for different physical activities: A comparison among sports, exercises and body/movement practices. *Psicologia USP*, 31. <https://doi.org/10.1590/0103-6564e190153>

- Kolev, P. (2020). Research of adolescent volleyball players intrinsic motivation for achievement of high sports results. *Research in Kinesiology*, 48(1-2), 35–37. <https://doi.org/10.46705/rik201-20035k>.
- Kozlovskiy, S., Kulinich, T., Vechirko, I., Lavrov, R., Zayukov, I., & Mazur, H. (2024). Relationship between net migration and economic development of European countries: Empirical conclusions. *Problems and Perspectives in Management*, 22(1), 605–618. [https://doi.org/10.21511/ppm.22\(1\).2024.48](https://doi.org/10.21511/ppm.22(1).2024.48).
- Kuzheliev, M., Zherlitsyn, D., Nechyporenko, A., Lutkovska, S., & Mazur, H. (2023). Distance learning as a tool for enhancing university academic management processes during the war. *Problems and Perspectives in Management*, 21(2), 23–30. [https://doi.org/10.21511/ppm.21\(2-si\).2023.04](https://doi.org/10.21511/ppm.21(2-si).2023.04).
- Lazareva, A., Myroshnychenko, V., Sanakuiev, M., & Gontarenko, L. (2023). Philosophical discourse of information ethics of the future. *Futurity Philosophy*, 2(1), 14–29. <https://doi.org/10.57125/FP.2023.03.30.02>
- Liang, Y., Zhang, J., Cui, Y., & Yuan, R. (2016). Experimental study for cultivating college students' sports motivation in sport education model. *Advances in Physical Education*, 06(03), 169–177. <https://doi.org/10.4236/ape.2016.63019>.
- Liu, T., & Lipowski, M. (2021). Sports gamification: Evaluation of its impact on learning motivation and performance in higher education. *International Journal of Environmental Research and Public Health*, 18(3), 1267. <https://doi.org/10.3390/ijerph18031267>.
- Malynovskyi, S., Duka, R., & Yaroshenko, K. (2019). Distance education in war conditions: Learning practical surgery skills. *Sworl-Us Conference Proceedings*, (usc11-01), 34–37. <https://doi.org/10.30888/2709-2267.2022-11-01-014>.
- Marheni, E., Purnomo, E., & Intan Cahyani, F. (2019). The role of motivation in increasing achievement: Perspective sports psychology. In *Proceedings of the 2nd International Conference on Sports Sciences and Health 2018 (2nd ICSSH 2018)*. Atlantis Press. <https://doi.org/10.2991/icssh-18.2019.14>.
- Pratiwi, E., Anggara, N., & Kasantawali, A. (2023). Increasing learning outcomes for volleyball passing using cooperative learning methods. *Sriwijaya Journal of Sport*, 2(3), 174-182. <https://doi.org/10.55379/sjs.v2i3.967>.
- Ribeiro, L. B., Tertuliano, I. W., Rebusini, F., Valim-Rogatto, P. C., & Machado, A. A. (2020). Analysis of the reasons for the regular practice of physical activity in the return

- of injuries of amateur Volleyball athletes. *Manual Therapy, Posturology & Rehabilitation Journal*, 1–7. <https://doi.org/10.17784/mtprehabjournal.2017.15.548>.
- Schiff, N. T., & Supriady, A. (2023). Sports education model (SEM) on students' motivation and physical activity in classroom: A literature review. *Jurnal SPORTIF : Jurnal Penelitian Pembelajaran*, 9(1), 40–58. https://doi.org/10.29407/js_unpgri.v9i1.19067.
- Shevchuk, G. (2022). Ukrainian education under the wartime challenges. *Humanities Science Current Issues*, (51), 745–749. <https://doi.org/10.24919/2308-4863/51-114>.
- Shkola, O. M., Otravenko, O. V., Donchenko, V. I., Zhamardiy, V. O., Saienko, V. G., & Tolchieva, H. V. (2022). The influence of tae-bo on the development of motor potential of students of medical and pedagogical specialties and its efficiency in the process of extracurricular activities. *Wiadomości Lekarskie*, 75(4 p1), 865-870. <https://doi.org/10.36740/WLek202204121>.
- Suprunenko, S., Pylypenko, N., Trubnik, T., & Volchenko, N. (2023). Forecast of changes in the macroeconomic situation in Ukraine: smart economy of the future. *Futurity Economics & Law*, 3(3), 219–236. <https://doi.org/10.57125/FEL.2023.09.25.13>
- Syahrudin, S., Saleh, M. S., & Saleh, M. S. (2019). The influence of kinesthetics, attitude and motivation on the learning results of sports education. *Jurnal SPORTIF : Jurnal Penelitian Pembelajaran*, 5(2), 232. https://doi.org/10.29407/js_unpgri.v5i2.12871.
- Tendinha, R., Alves, M. D., Freitas, T., Appleton, G., Gonçalves, L., Ihle, A., Gouveia, É. R., & Marques, A. (2021). Impact of Sports education model in physical education on students' motivation: A systematic review. *Children*, 8(7), 588. <https://doi.org/10.3390/children8070588>.
- Vasilache, S. (2022). Suddenly online: Active learning implementation strategies during remote teaching of a software engineering course. In *Mobility for Smart Cities and Regional Development - Challenges for Higher Education* (p. 395–402). Springer International Publishing. https://doi.org/10.1007/978-3-030-93904-5_40.
- Vignadelli, L. Z., Ronque, E. R. V., Bueno, M. R. D. O., Dib, L. R. P., & Serassuelo Junior, H. (2019). Motives for sports practice in young soccer and volleyball athletes. *Brazilian Journal of Kinanthropometry and Human Performance*, 20(6), 585–597. <https://doi.org/10.5007/1980-0037.2018v20n6p585>.

Yefremenko, V., & Syrovatko, Z. (2024). Impact of the war in the between russia and ukraine 2014-2024 period on the mental and emotional state of students. *Scientific Journal of National Pedagogical Dragomanov University. Series 15. Scientific and Pedagogical Problems of Physical Culture (Physical Culture and Sports)*, 3(175, 15–18. [https://doi.org/10.31392/udu-nc.series15.2024.3\(175\).03](https://doi.org/10.31392/udu-nc.series15.2024.3(175).03).